

## Claims:

1. A method of treating an impaired neurological function in an individual who has sustained a brain injury comprising administering to said individual an effective amount of modafinil (benzhydrylsulfinylacetamide).
2. The method of according to Claim 1, wherein said modafinil is administered to said individual in conjunction with a neurorehabilitation program comprising one or more neurostimuli designed to enhance or restore said impaired neurological function.
3. The method according to Claim 2, wherein said neurorehabilitation program provides physical therapy, occupational therapy, speech therapy, and combinations thereof.
4. The method according to Claim 2, wherein said neurorehabilitation program is selected from the group consisting of a physical/sensory protocol, an electrical and/or magnetic stimulation regimen, and/or a drug-based stimulation regimen.
5. The method according to Claim 4, wherein said physical/sensory protocol comprises a neurostimulus selected from the group consisting of an exercise or task for motor function, an exercise or task for cognitive function, an exercise or task for a combination of motor and cognitive function, a light stimulation, an audio stimulation, a visual stimulation, a tactile stimulation, and combinations thereof.
6. The method according to Claim 4, wherein said electrical and/or magnetic stimulation comprises trans-cranial magnetic stimulation (TMS) or deep brain stimulation (DBS)
7. The method according to Claim 4, wherein said drug-based stimulation regimen comprises administering a neurostimulant drug.

8. The method according to Claim 7, wherein said neurostimulant drug is selected from the group consisting of caffeine, an amphetamine, a dextroamphetamine, a methylphenidate, and combinations thereof.
9. The method according to Claim 2, wherein said modafinil is administered to said individual prior to or concurrently with said individual performing an exercise or task to promote or restore an impaired neurological function.
10. The method according to Claim 9, wherein administration of modafinil is stopped after said individual performs an exercise or task and wherein said administration is not resumed until further exercise or task is performed.
11. The method according to Claim 2, wherein said administration of modafinil and a neurorehabilitation program are ended after a period time, the individual is permitted a period of rest from administration of said modafinil and said neurorehabilitation program, and the individual is then administered modafinil and a neurorehabilitation program for a period of time.
12. The method according to Claim 11, wherein after said period of rest, said administration of modafinil is resumed at a different dose and/or said neurorehabilitation program is different from those employed initially.
13. The method according to Claim 11, wherein said period of administration of modafinil and a neurorehabilitation program is 2 weeks and said period of rest is 4 to 12 weeks.
14. The method according to Claim 1, wherein said modafinil is administered at a dose of from 50 to 600 mg/day.
15. The method according to Claim 14, wherein said dose is 100, 200, 400, or 600 mg/day.

16. The method according to Claim 15, wherein said dose is 200 mg/day.
17. The method according to Claim 2, wherein said modafinil is administered at a dose of from 50 to 600 mg/day in conjunction with administering said neurorehabilitation program.
18. The method according to Claim 17, wherein said dose is 100, 200, 400, or 600 mg/day.
19. The method according to Claim 18, wherein said dose is 200 mg/day.
20. The method according to Claim 1, further comprising administering to said individual a dopaminergic agent that crosses the blood-brain barrier.
21. The method according to Claim 1, further comprising administering to said individual a dopaminergic agent selected from the group consisting apomorphine, bromocriptine, amantadine, pergolide, pramipexole, ropinirole, fenoldopam, cabergoline, rotigotine, lysuride, talipexale, 7-OH DPAT, quinpirole, SKF-38393, L-dopa, and combinations thereof.
22. The method according to Claim 1, wherein the neurological function impaired in said individual is selected from the group consisting of a cognitive function, a motor function, and a combination of cognitive and motor functions.
23. The method according to Claim 1, wherein said brain injury is the result of an event selected from the group consisting of traumatic brain injury, an ischemic episode, spinal cord injury, major organ failure, a brain injury associated with cardiovascular bypass surgery, an anoxic event, a hypoxic event, a drug-induced brain injury, encephalitis, multiple sclerosis, and a degenerative disease.
24. The method according to Claim 23, wherein said traumatic brain injury is the result of a fall on a hard surface, a vehicle accident, or a strike to the head.

25. The method according to Claim 23, wherein said ischemic event is a stroke.
26. Use of modafinil for treating an impaired neurological function in an individual who has sustained a brain injury.
27. Use of modafinil for the manufacture of a medicament for the treatment of an impaired neurological function in an individual who has sustained a brain injury.
28. Use of modafinil in conjunction with a neurorehabilitation program for treating an impaired neurological function in an individual who has sustained a brain injury.
29. Use of modafinil for the manufacture of a medicament for the treatment, in conjunction with a neurorehabilitation program, of neurological impairment resulting from a brain injury.